

WHAT IS CLAIMED IS:

1. A steering wheel having an airbag apparatus, which comprises:

a ring grasped at the time of steering, a boss disposed on a center of said ring, three spokes for connecting said ring and said boss, and a space between said spokes,

said steering wheel having, as constituent parts, a steering wheel body, said airbag apparatus disposed on said boss, and a switch operating portion that is operated from above,

said switch operating portion being disposed at least one of said boss and said spoke,

said airbag apparatus having

an airbag folded such that the airbag is expand,

an inflator for supplying expansion gas to said airbag,

a pad for covering said folded airbag, and

a bag holder connected to said steering wheel body for holding said folded airbag, said inflator and said pad,

said pad including three doors such that one opening through which said airbag projects can be formed in a center of said pad,

each of said doors being provided at its periphery with to-be ruptured portion, said door being pushed by

said airbag when it is expanded and said to-be ruptured portion is ruptured, said door opening around a hinge disposed on the side of an outer periphery of said pad as a rotation center,

said hinge of each of said doors being disposed at a position near said space between said spokes, and on the side of an outer periphery of said pad that is lower than an portion above a holding portion held by said bag holder near said hinge,

each of said doors being disposed in said three spaces between the spokes when said door opens around said hinge as a rotation center; and

said switch operating portion being disposed on an area other than said doors and on said boss or said spoke that is not covered with said door when it opens.

2. A steering wheel having an airbag apparatus according to claim 1, wherein

said to-be ruptured portion at a portion of the adjacent doors is substantially T-shape as viewed from above, and has a lateral line portion disposed in the right-left direction and a longitudinal line portion extending rearward from a substantially central portion of said lateral line portion,

left and right opposite ends of said lateral line portion are directed to disposition directions of the

front left and right spokes of said spokes, and

a rear end of said longitudinal line portion is directed to a disposition direction of said rear spoke in said spoke.

3. A steering wheel having an airbag apparatus according to claim 1, wherein

said pad comprises

a ceiling wall disposed on an upper portion and having said doors and said to-be ruptured portion, and

a side wall extending downward from said ceiling wall and disposed in the vertical direction such that said side wall is connected to said bag holder,

remaining portion of said to-be ruptured portion except adjacent portions of said doors is disposed close to an inner surface of said side wall of said ceiling wall and substantially along said side wall.

4. A steering wheel having an airbag apparatus according to claim 1, wherein

said folded airbag includes three clots of folding portions, each clot is disposed below each of said doors of said pad and accommodated.

5. A steering wheel having an airbag apparatus according to claim 1, wherein

said pad is held by said bag holder using a rivet.

6. A steering wheel having an airbag apparatus according to claim 5, wherein

said bag holder includes a retaining pawl for retaining said pad,

said pad being held by said bag holder utilizing said rivet and said retaining pawl.

7. A steering wheel having an airbag apparatus according to claim 1, further comprising an auxiliary plate having an insertion piece to be inserted into said pad, said auxiliary plate being fixed to said bag holder,

said bag holder having a retaining pawl for retaining said pad,

said pad being sandwiched between said insertion piece and said retaining pawl and held by said bag holder.

8. A steering wheel having an airbag apparatus according to claim 3, further comprising an auxiliary plate having a limiting wall disposed on an outer surface of a portion of said side wall connected to said bag holder, said auxiliary plate being fixed to said bag holder,

said bag holder having a retaining pawl for retaining said side wall,

said pad being prevented by said limiting wall from coming out from said retaining pawl, and connected to and held by said bag holder.

9. A steering wheel having an airbag apparatus, which comprises:

a ring grasped at the time of steering, a boss disposed on a center of said ring, and a spoke for connecting said ring and said boss,

said airbag apparatus being disposed on an upper portion of said boss,

said airbag apparatus comprising an airbag that is folded such that it is expanded, and a pad for covering said folded airbag,

said pad including a door that is pushed by said expanding airbag and opened,

a switch operating portion being disposed below said door when it is opened,

said switch operating portion being disposed in a non-limited region where an opening-completion state of said door is not limited for said door that has completed its opening operation.

10. A steering wheel having an airbag apparatus according to claim 9, wherein

said switch operating portion is disposed in said

non-limited region when said switch operating portion is pushed and moved by said door when it opens.

11. A steering wheel having an airbag apparatus according to claim 10, wherein

said switch operating portion is provided at its upper portion with an operation button that is pushed down for operation, and when said switch operating portion is pushed and moved by said door, said switch operating portion is rotated and moved in the lateral direction that intersects with an operation direction of said operation button substantially at right angles so that said switch operating portion is moved to said non-limited region.

12. A steering wheel having an airbag apparatus according to claim 10, wherein

said switch operating portion is lowered and moved to said non-limited region when said switch operating portion is pushed and moved by said door.

13. A steering wheel having an airbag apparatus according to claim 9, wherein

said switch operating portion is originally disposed in said non-limited region.